



## ***Permit Requirement Changes***

Revised 06/07/2002

# **Sanitary Sewer Evaluation Survey (SSES) - PLAN B**

### **Purpose of the SSES**

The sanitary sewer evaluation survey is intended to locate and correct excessive infiltration and inflow (I/I) into the sewer lines in Miami-Dade County. At the present, excessive I/I flows cause sewer overflows leading to public health threats. This survey is one of several actions required by Chapter 24 of the Miami-Dade County Code to prevent these problems.

### **County Code Requirement for SSES:**

Section 24-13.1(A)(1) of the Miami-Dade County Code provides that:

*Each publicly or privately-owned or operated sanitary sewer collection system shall be evaluated in order to identify and reduce infiltration and inflow into the sanitary sewer collection system. The person responsible for the sewer system's operation shall implement a sewer system evaluation survey (SSES) and, if required, a rehabilitation program, incorporating the provisions and requirements set forth in the U.S. EPA's Sewer System Infrastructure Analysis and Rehabilitation Handbook*

The timing for the production of this document, as set by Ordinance, requires that it be completed and submitted by **November 12, 2002**.

### **Description of SSES      Due November 12, 2002**

There are two types of SSES. The type that each facility will use depends on the quantity of gravity main at the facility. Those facilities with less than 1000 feet of main may use the abbreviated survey described below as Plan 'A'. Facilities with greater than 1000 feet of qualifying main, with or without a private sanitary pump station, will be required to complete the standard survey described below as Plan 'B'. If you are unsure which category your facility falls into, please contact Mr. Oscar Aguirre at 305-372-6899.

### **Plan B**

This survey will require the evaluation of the system to determine the amount of infiltration/inflow (I/I) entering the collection system, and, if this flow exceeds the maximum allowed rate, locate the major sources of these flows. This survey may include such methods as measurement of actual flows during dry and wet season conditions, television surveys of the collection system, and smoke testing.

The initial part of the survey will consist of the smoke testing, visual inspection, and required repairs described in Plan 'A'. Additionally, flow measurements shall be taken to determine the amount of infiltration/inflow into the system. These measurements shall be taken during the wet season described above, and shall be conducted continuously for a period of at least three days. These measurements and any additional required studies shall be carried out by firms or individuals competent in this field, using approved methods.

If the measured infiltration/inflow of the system exceeds the allowed rate, an additional survey shall be conducted to determine the source of the infiltration/inflow. Upon the completion of the study, repair work to correct the problems discovered shall be carried out and completed within the time required by DERM. Required work in this phase shall include correction of point source problems including repair of crushed or broken pipes, properly sealing cleanout caps, correcting improper connections of stormwater drains and sewers, repair of visible inflow sources into manholes, and any other specific actions as directed by DERM.

### **DERM Monitoring Requirements**

DERM shall be notified three (3) working days in advance of any smoke test or flow measurement in order to provide an observer. **Failure to notify DERM in advance of the test may result in invalidation of the data, requiring the test or measurement to be repeated.** Notification can be sent/addressed to:

#### **DERM – PSO Program Coordinator**

Phone Number: 305.372.6899

Fax Number: 305.372.6550

Internet Address: [aguero@miamidade.gov](mailto:aguero@miamidade.gov)  
[neumar@miamidade.gov](mailto:neumar@miamidade.gov)

for Oscar Aguirre

for Richard Neumann

### **Evaluation Criterion for SSES**

Pursuant to Chapter 24-13.1(A)(4) of the Miami-Dade County Code, the total combined Infiltration/Inflow shall be less than 5,000 gallons flow per day times the product of the nominal diameter of the pipe in inches and the length of the pipe in miles. Where the system contains pipes of different diameters, each run of pipe shall be calculated separately and the values added to determine the total for the system. For example, a system with 1000 feet of six inch nominal pipe would have a maximum permissible Infiltration/Inflow of  $1000 \times 6 \times 5000 / 5280 = 5680$  gallons per day.

### **Requirements for Additional Corrections**

Section 24-13.1(A)(5) of the Miami-Dade County Code provides that:

*In the event that implementation of the initial sewer system infiltration and inflow rehabilitation programs fail to achieve the performance standards established in this section, the person responsible for the system's operation may, in lieu of performing additional rehabilitation, submit a*

*cost-benefit analysis which analyzes the feasibility of performing additional rehabilitation to achieve said performance standards. If the director or his designee determines that there is no technically feasible, economically reasonable means of compliance, then no further rehabilitation shall be required.*

This Section is applicable only under specific conditions. The cost-benefit analysis shall be conducted only after the SSES has been completed, required corrections have been made, and a second flow measurement has indicated I/I flows in excess of the allowed rate.

This Section does not allow for the cost-benefit analysis to be submitted instead of the Sanitary Sewer Evaluation Survey (SSES). The SSES is a required document for all sewer systems permitted under the DERM Private Sanitary Sewers Operating Permit (PSO) program. This survey must be completed for all systems and submitted to DERM before November 12, 2002.

After completion of required repairs, the system shall again be tested by flow measurements to determine if it meets the mandated standard. The wet season portions of these measurements shall be carried out between June 15 and September 15 and within one year of the completion of repairs. If measured I/I flow is less than the allowable maximum; no further action is required by DERM. If the I/I flow exceeds the maximum allowable I/I rate, the system operator has the option of either taking further action to reduce the flow or conducting a cost analysis and submitting it to DERM to determine if further action can be economically justified. Economic justification of the work shall be based on the estimated reduction in I/I flow, the estimated cost of the work, and a cost factor for the flow based on one hundred twenty (120) times the monthly per gallon rate. Cost estimates for the work will be based on standard nationally accepted price-estimating sources.

Within three months of the second flow measurement, the permittee must submit either a schedule of additional repairs or an economic cost-benefit analysis.

Those actions shown to be economically justified shall be carried out within one year of the inception of the cost-benefit analysis. Even if the entire project does not have a positive cost-benefit ratio, action on parts of the work that do have a positive ratio may be required.

Be advised that I/I flows which are below the level that would trigger action by DERM may still be subject to additional fees imposed by the public utility serving the facility.

### **Grandfathered Facilities**

All Properties/Facilities with sewer systems certified after November 12, 1997, will be granted a grandfather exemption from submitting the SSES for the first cycle which ends on November 12, 2002. Proof of certification must be provided.

Be advised that said Properties/Facilities would have to submit the SSES for the second cycle, which runs from November 12, 2002, until November 12, 2012 prior to the end of the cycle. DERM will send reminders of the SSES requirements for the second cycle to all facilities when appropriate.